Amendments to the Claims

21. (Currently Amended): A method for determining an output value having a known relationship to an input value with a predicted value that has errors associated therewith, comprising the steps of:

training a predictive model with ~~a set of~~ at least one known output[[s]] for a given set of inputs that exist in a finite dataset which ~~each~~ at least one known output has a fixed and defined relationship to each ~~one or more~~ of the inputs within the given set of inputs such that each and all of the inputs has a direct effect on the at least one known output;

inputting input data to the predictive model that is within the set of given inputs and such that there is data provided for each input; and

predicting an output from the predictive model that corresponds to the given input or inputs that corresponds to the input data such that a predicted output value will be obtained which will have associated therewith the errors of the predictive model as compared to the actual fixed and defined relationship between the inputs and the at least one known output.

22. (Original): The method of Claim 21, wherein the predictive model is a non-linear model.

23. (Original): The method of Claim 21, wherein the set of known outputs for a given set of inputs is derived from at least one physical property table.

24. (Original): The method of Claim 21, wherein the set of known outputs for a given set of inputs is derived from a plurality of physical property tables.

25. (Original): The method of Claim 24, wherein the predictive model includes at least one input that is a discriminating input to define which of said tables is associated with the inputs, such that processing the input through the predictive model will process it through a learned representation of only that table.

26. (Original): The method of Claim 21, wherein the predictive model is trained on less than all of the data in the physical property tables.

27. (Currently Amended): A method for defining the relationship of output variables to input variables in a spreadsheet wherein each output variable faces a known and fixed relationship with one or more of the input variables, comprising the steps of:

defining a set of input variables;

defining at least one known output variable that has a known and fixed relationship with a defined one or more of the input variables, which known and fixed relationship between the output variables and the one or more of input variables is contained in a predefined and fixed dataset such that each and all of the one or more of the input variables has a direct effect on the at least one known output variable in the dataset; and

determining the value of the known output variable from the one or more of the input variables by mapping the one or more of the input variables through a stored representation of the dataset with the known and fixed relationship represented therein in a predictive model to predict the known output variable from the stored representation and replacing the previous value of the corresponding output variable with the predicted value for the known output variable.

28. (Original): The method of Claim 27, wherein the step of mapping comprises mapping the input variable through a stored representation of the dataset in a non-linear predictive model.

29. (Original): The method of Claim 27, wherein the stored representation represents less than all of the data within the dataset.

30. (Original): The method of Claim 27, wherein the dataset comprises a physical property table and the input variables and the output variables comprise physical properties that are within the physical property table.

31. (Original): The method of Claim 30, wherein there is a known output within the dataset

for each of the input variables utilizing the step of determining.

32. (Original): The method of Claim 27, wherein the step of determining is initiated in response to the input of a change to any one of the defined set of inputs, wherein the inputs and outputs are arranged in columns and rows in the spreadsheet.